

### **REMARKS**

By this amendment, new claims 17-18 have been added. The specification has been amended to correct certain informalities. Accordingly, claims 1-18 are currently pending in the application, of which claims 1 and 16 are independent.

Applicants respectfully submit that the above amendments do not add new matter to the application and are fully supported by the specification. Support for new claims 17-18 may be found at least at page 7, lines 6-7 of the specification.

Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

#### ***Rejections Under 35 U.S.C. § 103***

Claims 1-6, 8-10, and 11-16 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,335,548 issued to Roberts, *et al.* ("Roberts") in view of U.S. Patent Application Publication No. 2005/0001562 applied for by Pederson, *et al.*, one embodiment, FIG. 12 ("Pederson"). Applicants respectfully traverse this rejection for at least the following reasons.

The Office Action appears to indicate that Pederson was cited in the IDS filed July 26, 2007. Pederson was not, however, cited in that IDS. Rather, it was cited in the **Notice of References Cited** of September 14, 2007.

Applicants respectfully submit that the 35 U.S.C. § 103(a) rejections of independent claims 1 and 16 must be withdrawn because Pederson is not prior art to the subject matter of claims 1 and 16.

First, Pederson, which was published January 6, 2005, is not available as prior art under either 35 U.S.C. § 102(a) or (b) because the present application's effective U.S. filing date is May 14, 2004. See MPEP § 1893.03(b).

Second, Applicant asserts that Pederson is disqualified as a reference against claims 1 and 16 under § 102(e). Pederson is a U.S. Patent Application Publication and is available under 35 U.S.C. § 102(e) as of its effective U.S. filing date, July 2, 2003. See MPEP § 2136.01(I) & MPEP § 706.02(VI)(C). The present Application is a National Stage Application of International Application No. PCT/KR/2004/001153 and properly claims priority to and the benefit of two Korean patent applications, one of which is Korean Application No. 10-2003-0033989, filed on May 28, 2003, and thus establishes a date of invention for the subject matter disclosed therein that is earlier than Pederson's effective U.S. filing date.

In accordance with 37 CFR § 1.55(a)(1), Applicant timely filed a claim of priority to and a certified copy of Korean Application No. 10-2003-0033989 on November 23, 2005. To disqualify Pederson as a valid reference under 35 U.S.C. § 102(e) for the subject matter disclosed in Application No. 10-2003-0033989, Applicant now timely submits an English translation of the certified foreign priority document and a statement that the translation of the certified foreign priority document is accurate in accordance with 37 CFR § 1.55(a)(4)(ii).

Thus, because Pederson is disqualified as a reference against claims 1 and 16, Applicant respectfully submits that the rejection of claims 1 and 16 over Roberts in view of Pederson must be withdrawn.

Furthermore, the Office Action also fails to establish a *prima facie* case of obviousness because its reliance on Robert's dies 1910 and 1911 to teach the heat sinks of claims 1 and 16 is completely unreasonable. Here, the Office Action states "note that HS1 and HS2 are sitting on top of heat extraction 204 which are conducting heat to 204 therefore they are considering as the heat sinks [sic]" (Office Action, page 4). In other words, the Office Action concludes that dies 1910 and 1911 are heat sinks because they conduct heat to the heat extraction member 204. Applicants disagree. A heat sink is not merely a heat conducting member, as the Office Action suggests. Although claim terms are given their broadest reasonable interpretation, that

interpretation must be consistent with the specification, and it "must also be consistent with the interpretation that those skilled in the art would reach" MPEP § 2111 (emphasis added). The Office Action's current interpretation fails both tests. In fact, probably every element in Roberts device is capable of transferring heat. Under the Office Action's logic, therefore, every element of Robert's device could be a heat sink. This analysis does not withstand scrutiny. A person of ordinary skill in this art would clearly not equate Robert's dies 1910 and 1911 with a heat sink. Equating dies with heat sinks merely because the dies conduct heat goes far beyond the reasonable meaning of "heat sink." This is particularly so here, where Roberts also teaches that dies 1910 and 1911 are formed on heat extraction member 204. Any future Office Actions should not be based on this unreasonable and unfair interpretation of Roberts.

Furthermore, Applicants respectfully submits that the Examiner confuses an LED die with an LED package. Specifically, the Examiner considers Pederson's LED package as Robert's LED die. This confusion makes for continuously unreasonable office actions. But as an ordinarily skilled artisan knows, an LED die is quite different from an LED Package. Thus, Applicants respectfully submit that future Office Actions should not be based on similar, erroneous reasoning.

Finally, Applicants respectfully submit that an ordinarily skilled artisan would not have combined Roberts' embodiment in Figures 5-6 with the embodiment of Figures 19A-19B as the Office Action does (page 4). Here, the Office Action acknowledges that Roberts' embodiment of Figures 19A-19B does not disclose a heat sink of electrically and thermally conductive metallic materials, but relies on embodiment of Figures 5-6 to cure this deficiency (page 4). Specifically, the Office Action states that "Nevertheless, Roberts, one embodiment, FIGS 5-6 does teach a heat sink of electrically and thermally conductive metallic materials (502, col. 16, lines 30-67)" (page 4; emphasis added). Applicants disagree that a skilled artisan would have combined these embodiments in the manner claimed. Roberts does not teach that the bottom portions of

dice are of metallic materials. Generally, the bottom portion of a die is part of a substrate suitable for growing compound semiconductors thereon. Thus, the substrate can not be of metallic material. Consequently, an ordinarily skilled artisan would not have combined these embodiments in this manner.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1 and 16. Claims 2-6, 8-10, and 11-15 depend from claim 1 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicants respectfully submit that independent claims 1 and 16, and all the claims that depend therefrom, are allowable.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Roberts in view of Pederson and further in view of Roberts, another embodiment, FIGS. 1-15 ("Roberts 2"). Applicants respectfully traverse this rejection for at least the following reasons.

Pederson has been disqualified as a reference, and Roberts fails to disclose or suggest every feature of claim 1. Thus, claim 7 is allowable at least because it depends from an allowable claim 1.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claim 7.

#### ***Added Claims***

Added claims 17-18 are directed to additional aspects of the invention, which are not disclosed or suggested in the art of record. These claims are allowable at because they depend from allowable base claims.

***Other Matters***

Various paragraphs of the specification have been amended solely for the purposes of informality correction, better wording, and clarification. These amendments are not made for the purpose of avoiding prior art or narrowing the claimed invention, and no change in claim scope is intended. Therefore, Applicants do not intend to relinquish any subject matter by these amendments.

**CONCLUSION**

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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Date: February 18, 2009

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